

Claims:

1. Process for the preparation of (1S, 4R)-4-hydroxy cyclopent-2-enyl esters comprising the steps of:
  - a) reacting a cis-cyclopent-1-ene-3,5-diol, or racemic or a partially resolved 4-hydroxy cyclopent-2-enyl ester, with a suitable ester donor in the presence of a lipase from *Alcaligenes* sp. and
  - b) recovering and purifying the produced (1S, 4R)-4-hydroxy cyclopent-2-enyl ester.
2. Process according to claim 1, wherein the reaction is carried out at a temperature in the range from 10°C to room temperature.
3. Process according to claim 1 or 2, wherein the *Alcaligenes* sp lipase is used in the free form or immobilized on a carrier material.
4. Process according to at least one of the claims 1 to 3, wherein the reaction is conducted in a low molecular weight ketone as a solvent.
5. Process according to claim 4, wherein acetone, isobutylmethylketone or methylethylketone are used as solvents.
6. Process according to at least one of the claims 1 to 5, wherein vinyl acetate or vinyl propionate are used as an ester donor.
7. Process according to at least one of the claims 1 to 6, wherein the *Alcaligenes* sp. lipase is either Meito Sangyo Lipase QL, Lipase QLM or Roche Chirazyme L-10 or a material derived from these preparations by purification or immobilisation.

8. Process according to at least one of the claims 1 to 7, wherein the biotransformation is run to an ee > 95%.
9. Process according to at least one of the claims 1 to 8, wherein the (1S, 4R)-4-hydroxy cyclopent-2-enyl ester is recovered by filtration of the biocatalyst, the solvent is being stripped off and the residual oil is resuspended in an aqueous solution, the cis-3,5-diacetoxy cyclopent-1-ene is removed via extraction into an alkane solvent.